

Summary of Some Ethical Issues in Human Stem Cell Research

I. Ethical Issues in Research Using Stem Cells Derived from *ex utero*, Nonviable Human Fetal Tissue.

1. Moral Status

The derivation of stem cells from aborted fetuses raises the issue of the relevance of the morality of (induced) abortion to stem cell research. Can one support this method of deriving stem cells while remaining neutral on the morality of abortion? Or must one engage the highly controversial and seemingly interminable problem of the moral status of the fetus?

This is an issue which has been addressed in the context of fetal tissue research. A common view in the literature on the ethics of fetal tissue research is that we can support the research without assuming that abortion is morally permissible. As long as guidelines are in place which ensure that abortion decisions and procedures are insulated from considerations of fetal tissue procurement and use in research, using aborted fetuses for research is no more problematic than using other cadavers donated for scientific and medical purposes. This is true -- so the argument runs -- even when we assume that fetuses are persons who are wrongly killed in being aborted. On this assumption, an aborted fetus is the moral equivalent of a homicide victim; and we do regard the donation of organs and cadavers of homicide victims to be morally permissible. Thus, the morality of research uses of fetal material does not turn on the morality of abortion.

Opponents of the research use of fetal materials obtained from induced abortions dispute the claim that we can dismiss the relevance of the morality of abortion. Their central argument for the relevance of the moral question is that researchers who use fetal material from induced abortions become complicit with the abortions which provide the material.

2. Complicity

There are two general ways in which one can maintain that researchers (and those who fund them) using stem cells derived from aborted fetuses are complicit with abortion: (1) The researchers bear some causal responsibility for abortions; (2) The researchers symbolically align themselves with abortion.

(1) A researcher may bear direct or indirect causal responsibility for abortions. There is direct causal responsibility where, for example, a researcher induces a particular woman to have an abortion in order to furnish fetal material. This can be prevented through guidelines and regulations which require that the decision and consent to abort precede discussion of the possible use of fetal material. Researchers who use fetal materials could nonetheless be indirectly responsible for abortions if the perceived benefits (or promise of benefits) of the research influenced some women's decision to abort. Opponents of the research have argued that it is likely that many women who are ambivalent about whether to abort would be swayed by the knowledge that having an abortion could contribute to the good of society. This is, of course, a speculative matter;

and the weight one attaches to it depends upon who one deems to have the burden of proof.

(2) Even if we should not expect research on stem cells derived from aborted fetuses to influence abortion decisions, some would hold that those involved in such research implicitly acquiesce in the practice of abortion by benefitting from it. The standard counter-argument draws upon the murder victim analogy cited above: A researcher who benefits from an aborted fetus need not acquiesce in the act of abortion any more than the researcher who benefits from the cadaver of a murder victim acquiesces in the homicidal act.

However, it is not clear that the murder victim analogy is satisfactory. One disanalogous fact is that abortion is a generally accepted practice while murder is condemned and punished. An analogy which captures this distinction may generate different intuitions about the moral permissibility of research using fetal material. Imagine the following: You live in a society where members of a particular racial or ethnic group are regularly killed when they are an unwanted burden. The practice is legally protected and generally accepted. Suppose that biological materials obtained from these persons subsequent to their deaths are made available for research uses. Would it be morally problematic for researchers to use these materials?

It is likely that many who consider it permissible to use the murder victim in the original case would not think it permissible to use materials derived from the deceased individuals in the latter scenario. Arguably, what underlies the judgment that the research in the hypothetical is morally problematic is the belief that there is a heightened need to act in ways that protest moral wrongs where those wrongs are socially accepted and institutionalized. Attempts to benefit from the moral wrong in these circumstances may be viewed as incompatible with one's mounting a proper protest.

On the pro-life view, the hypothetical case is analogous to the case of research uses of fetal material. Hence, if one concedes (at least for the sake of argument) that the fetus has the moral status of a person, it is not clear that it is morally permissible to use stem cells derived from aborted fetuses. Of course, one need not make this concession. But then there is no escaping adopting a stance on the vexing problem of the morality of abortion.

3. Consent

There is wide agreement that women should not be allowed to terminate a pregnancy for the purpose of donating fetal material. Two consent requirements help insulate the decision to donate from the decision to abort: (a) Informed consent for an abortion must be obtained prior to the consent to donate; (b) In the consent process for abortion, there must be no mention of the possibility of using fetal materials in research and transplantation.

The most serious charge against these requirements is that it is disrespectful of the autonomy of women considering abortion to withhold information from them regarding

the donation of fetal tissue. Because this information might be important to a woman's abortion decision, the failure to disclose the information would render the consent for the abortion ethically invalid.

The responses to this argument have been that (a) there is no obligation to disclose the option to donate because it is unethical for a woman to abort for this purpose; (b) knowledge of the option of donation (where financial incentives and donations directed to friends or relatives are prohibited) is not an incentive for a woman to abort a fetus she would otherwise carry to term; and (c) if clinic personnel are permitted to discuss donation prior to obtaining a woman's consent for abortion, women may be (or feel) pressured to have an abortion, in which case the voluntariness of the consent will be in doubt.

Another problem about consent concerns the matter of who can properly consent to donate fetal tissue. Legally, next of kin have a right to decide how to dispose of the dead fetus. But some object that, from an ethical standpoint, the mother -- as an agent of the fetus's death -- forfeits her rights in relation to the dead fetus. The force of this objection depends largely on whether one assumes that abortion is morally impermissible.

(Further -- and generally less contentious -- consent issues are identified in the "Points to Consider" document, distributed separately.)

4. Potential Benefits of Research

The potential applications of human pluripotent stem cells (e.g., for repairing injury and pathological processes and for pharmaceutical development) provide more compelling grounds than have hitherto existed for using fetal material in research. If one concludes that the morality of using stem cells derived from aborted fetuses does not turn on the morality of abortion, then the potential benefits of stem cell research are sufficient to justify the use of fetal material. On the other hand, if one concludes that the morality of abortion is decisive, then the justification for the use of fetal material in research must appeal to more than the benefits of research -- it must also provide a moral defense of abortion.

5. Limited Resources and Justice

One of the principal ethical considerations currently occupying health policy discussions is how best to allocate health resources; how, in other words, to fairly distribute limited or scarce resources, to provide benefits when not all can benefit. A number of allocation issues arise in research involving human stem cells:

- a) Should fetal tissue or human embryos -- as potential sources for obtaining human stem cells -- be considered a scarce, or limited research resource?
- b) If so, what policy approach should be adopted for determining how to allocate or distribute this source?
- c) Can ethical principles of distributive justice explain how best to allocate such resources?

- d) Should those resources about which there may be greater or lesser moral concern be used irrespective of these concerns? For example, if it is argued that using tissue obtained from aborted fetuses is less problematic than using stem cells derived from embryos created specifically for research purposes, does this create a *de facto* priority of utilization?
- e) Are all resources of equivalent utility? Should, for example, resources which exist in abundance be shared more widely and used for more types of research than those which are not in abundance?

II. Ethical Issues in Research Using Stem Cells Derived From Existing, Excess, *ex utero*, Viable Embryos.

1. Moral Status

Because researchers using embryonic stem cells will typically be responsible (as noted below) for the destruction of embryos, it does not appear that the ethics of research using embryonic stem cells can be divorced from the issue of the moral status of the embryo. If embryos have the moral status of persons, then how can it be ethically permissible to destroy them? While the question of the moral status of embryos seems relevant, the prospects of constructing a decisive argument about their moral status are dim. The problem which has plagued attempts to resolve the issue is that of drawing a nonarbitrary line between conception and infancy such that no beings before that line are persons and all beings after that line are persons. Any position one takes on the issue will be philosophically and politically controversial.¹

One commentator argues that we can avoid the issue of moral status altogether by addressing the issue of the proper limits of embryo research in terms of political philosophy rather than moral philosophy:

The political analysis entails a change in focus, away from the embryo and the research and toward an ethical balance between the interests of those who oppose destroying embryos in research and those who stand to benefit from the research findings. Thus, the deeper the degree of offense to opponents and the weaker the

¹ The Human Embryo Research Panel claimed to be neutral on the moral status issue: “[T]he Panel considered a wide range of views held by American citizens on the moral status of preimplantation embryos. In recommending public policy, the Panel was not called upon to decide which of these views is correct.”(Executive Summary, ix). Yet, as a number of commentators have noted, the Panel clearly did adopt a philosophical position on the moral status of the embryo when reaching the following conclusion:

Although the preimplantation human embryo warrants serious moral consideration as a developing form of human life, it does not have the same moral status as an infant or child. This is because of the absence of developmental individuation in the preimplantation embryo, the lack of even the possibility of sentience and most other qualities considered relevant to the moral status of persons, and very high rate of natural mortality at this stage.” (id., x)

opportunity for resorting to the political system to impose their vision, the more compelling the benefits must be to justify the funding.²

On this view, once we recognize that the substantive conflict among fundamental values surrounding embryo research cannot be resolved in a manner which is satisfactory to all sides, the most promising move is to perform a cost-benefit analysis of proceeding with the research. Thus, one could acknowledge that embryo research will deeply offend millions of people, but argue that the potential health benefits for this and future generations outweigh the pain experienced by opponents of the research.

One might, however, raise the question of whether the political analysis successfully brackets the moral status issue. One could object that placing the lives of embryos in this kind of utilitarian calculus will only seem appropriate to those who already presuppose that embryos do not have the status of persons. After all, we would expect most of those who believe – or who genuinely allow for the possibility -- that embryos have the status of persons, to regard such consequentialist grounds for sacrificing embryos as problematic.

2. Complicity

If it is assumed that destroying embryos is morally wrong, researchers using embryonic stem cells will clearly be complicit where (a) they derive the stem cells themselves or (b) they prompt others to derive the cells.

Some would argue that the complicity of researchers in the destruction of embryos should not be troubling because the embryos they use are ones which would be destroyed anyway. However, those who view the embryo as having the status of a person do not find this argument compelling; for it is not an acceptable excuse or justification for killing a person that one knows that someone (or something else) is soon going to kill him or her.

3. Consent

Many are concerned that the demand for embryos in stem cell research will lead to the production and discarding of embryos specifically for research purposes. A requirement that the decision to discard excess embryos be made prior to consent to donate them for research would – along with restrictions against financial inducements to gamete sources or IVF clinics and against directed donations – help prevent this.

Another issue concerns the kind of information which should be given to donors prior to consent. Since couples may have moral qualms about certain kinds of research uses of their embryos (e.g., experiments that turn what might have been their potential child into an organ, or a cell line to be marketed), couples arguably should be told specifically when (and how) their embryos will be used in stem-cell research.

² R. Alta Charo, “The Hunting of the Snark: The Moral Status of Embryos, Right-to-Lifers, and Third World Women, 6 Stan. L. & Policy Rev. 11,” (1995).

It is further important to note the possible role-conflicts which may result if an investigator is also a woman's (or couple's) physician or where the investigator is in a position of authority over a potential donor (e.g., a lab technician). In such cases, the use of a third-party to obtain consent would reduce the chances of coercion.

4. Benefits

See sections I, 5 and II, 1.

5. Limited Resources and Justice

See section I, 4.

III. Ethical Issues in Research Using Stem Cells Derived from New Embryos Produced for Research Purposes.

The central arguments in favor of creating embryos expressly for stem cell research are that (1) an embryo created by somatic cell nuclear transfer may offer the most promising way to obtain autologous tissue for transplantation, and (2) there may be an inadequate supply of discarded IVF embryos.

The major argument against creating embryos solely for research purposes is that it treats embryos as mere objects and is thus inherently disrespectful of human life. Those who oppose creating embryos for research but support the use of excess IVF embryos distinguish the acts by appeal to the intentions which underly them. Whereas embryos created for procreative purposes are originally viewed as potential children, embryos created for research are meant to be treated as mere objects of study from the outset.

Some would argue that the original intention of the creator of an embryo cannot ultimately bear much moral weight. If it is wrong to treat embryos as mere objects because of the respect they deserve as human life, the good intentions of their creators should not make it permissible to use them for research. However, one might still morally distinguish the use of embryos created strictly for research from research uses of discarded IVF embryos on the grounds that only the former use generates a net increase in harm to human life (since discarded IVF embryos will be destroyed either way).

It is also important to note that it is speculative (a) whether the supply of discarded embryos from IVF procedures will fail to satisfy the demand for them and (b) whether scientists will succeed in generating transplantable tissue from pluripotent stem cells (or whether they might be able to obtain autologous tissue without using embryos -- e.g., through the reversion of tissue-specific stem cells to pluripotent status). Thus, one might argue that at this time there is insufficient evidence to justify the creation of embryos for stem cell research.

